## ABSTRACT OF THE DISCLOSURE

A method and system of producing a parametric ultrasonic wave to be decoupled in air to create a decoupled audio wave that closely corresponds to an audio input signal. The method is comprised of ascertaining 402 a linear response over a predefined frequency range of an acoustic output of an electro-acoustical emitter to be used for parametric ultrasonic output. A parametric ultrasonic processed signal is then created by adjusting 404 linear parameters of at least one sideband frequency range of a parametric ultrasonic signal to compensate for the linear response of the acoustic output of the electro-acoustical emitter such that when the parametric ultrasonic processed signal is emitted from the electro-acoustical emitter, the parametric ultrasonic wave is propagated, having sidebands that are closely matched at least at a predefined point in space over the at least one sideband frequency range.

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